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09/239,578	01/28/1999	KAPIL D. SINGH	06089.P007	6276

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ART UNIT	PAPER NUMBER
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

		Application No.	Applicant(s)
Office Action Summary		09/239,578	SINGH, KAPIL D.
		Examiner	Art Unit
		Ayal I. Sharon	2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/28/99* .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 January 1999</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other:

DETAILED ACTION

Introduction

1. Claims 1-26 of U.S. Application 09/239,578 filed on 01/28/1999 are presented for examination. Applicant's arguments filed 08/05/2002 have been fully considered but they are not persuasive.

Drawings

2. This application has been filed with drawings that are informal in nature and objected to by the Draftsperson. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Objections

3. Claims 5, 12, 20 are objected to because of the following informalities: the term "selected ones of the design variables" is awkward. Should be: "selected design variables". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of
making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly

connected, to make and/or use the invention. Claim 1 requires the following

limitation: "replicating a sub-graph". However, this limitation is not adequately

discussed in the specifications. Dependant claims 2-3 and 6-7 inherit this defect.

7. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly

connected, to make and/or use the invention. Claim 1 requires the following

limitation: "merging the replicated sub-graph ...". However, this limitation is not

adequately discussed in the specifications. Dependant claims 2-6 inherit this

defect.

8. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 2 requires the following limitation: "identifying the sub-graph for replication". However, this limitation is not adequately discussed in the specifications.

9. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 8 requires the following limitation: "to replicate a sub-graph". However, this limitation is not adequately discussed in the specifications. Dependant claims 9-10 and 13-15 inherit this defect.

10. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 8 requires the following limitation: "to merge the replicated sub-graph ...". However, this limitation is not adequately discussed in the specifications. Dependant claims 9-13, and 15 inherit this defect.

11. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 9 requires the following limitation: "to identify the sub-graph for replication". However, this limitation is not adequately discussed in the specifications.

12. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 16 requires the following limitation: "to replicate a sub-graph". However, this limitation is not adequately discussed in the specifications. Dependant claims 17, 18, 21, 23-24 inherit this defect.

13. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 16 requires the following limitation: "to merge the replicated sub-graph ...". However, this limitation is not adequately discussed in the specifications. Dependant claims 17-21, 23 and 24 inherit this defect.

14. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 17 requires the following limitation: "identify the sub-graph for replication". However, this limitation is not adequately discussed in the specifications.

15. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 24 requires the following limitation: "a first and second processor communicatively coupled to each other to correspondingly execute the first and second plurality of programming instructions". However, this limitation is not adequately discussed in the specifications.

16. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 25 requires the following

limitation: "means to replicate a sub-graph". However, this limitation is not

adequately discussed in the specifications.

17. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly

connected, to make and/or use the invention. Claim 25 requires the following

limitation: "means to merge the replicated sub-graph ...". However, this limitation

is not adequately discussed in the specifications.

18. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly

connected, to make and/or use the invention. Claim 26 requires the following

limitation: "replicating a subset ...". However, this limitation is not adequately

discussed in the specifications.

19. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as containing subject

matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly

connected, to make and/or use the invention. Claim 26 requires the following

limitation: "merging the replicated subset ...". However, this limitation is not adequately discussed in the specifications.

Claim Interpretations

20. Examiner interprets "replication" and "replicating" as being equivalent to making an exact copy.

21. Examiner interprets "merging" two graphs as being equivalent to connecting two graphs.

22. Examiner interprets "dependent graph of a design" as being equivalent to a graph consisting of nodes and arcs. (Specification, p.7)

23. Examiner interprets "modeling information" (claims 1,8,16) as being equivalent to node, segment or face identification or position data.

24. Examiner interprets "design variables" (claims 3, 5, 7, 10, 12, 14,18, 20, 22) as being variables derived from "modeling information", variables such as length of a line, orthogonal direction vector for a face, etc.

Claim Rejections - 35 USC § 102

25. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

26. The prior art cited is as follows:

27. Ansaldi et al., "Geometric modeling of solid objects by using a face adjacency graph representation", Proceedings of the SIGGRAPH '85 conference on Computer Graphics, pp.131-139, 1985. (Henceforth "Ansaldi")

28. An Introduction to Solid Modeling, Mäntylä. Computer Science Press, ISBN 0-7167-8015-1. 1988. (henceforth "Mantyla_2")

29. Zeid, Ibrahim. CAD/CAM Theory and Practice, 1991. pp.388-437. (Henceforth "Zeid")

30. The claims are subsequently recited for Applicant's convenience. Applicant's attention is also directed to the pertinent sections of the prior art.

31. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ansaldi. Ansaldi teaches the limitations of Claim 1:

> 1. In a computer system, a method of operation comprising:
>   replicating a sub-graph from a first dependent graph of a first mechanical design of a computer aided design (CAD) tool, the first dependent graph having modeling information of the first
> mechanical design and the replicated sub-graph having modeling information of a subpart of the first mechanical design; (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)
>
>   merging the replicated sub-graph into a second dependent graph of a second mechanical design of the CAD tool to reuse the subpart of the first mechanical design in the second
> mechanical design. (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

32. Claims 2-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ansaldi. Ansaldi teaches the limitations of Claim 1, as discussed above. Moreover, in regards to Claim 2:

> 2. The method of operation of claim 1 further comprising receiving identification of the subpart of the first mechanical design, and in response, identifying the sub-graph for replication. (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

33. Claim 3-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi. Ansaldi teaches the limitations of Claim 2, as discussed above.

Moreover, in regards to Claims 3:

> 3. The method of operation of claim 2, wherein
> said first dependent graph includes a first plurality of nodes correspondingly represent a first plurality of design variables of the first mechanical design, and a first plurality of arcs linking the first plurality of nodes in accordance with the first plurality of design variables' dependency on one another; and
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)
>
> said identification of the sub-graph for replication comprises correlating said received identification of the subpart to one or more nodes of said first plurality of nodes directly associated with the subpart, and following applicable ones of said first plurality of arcs to identify all other nodes of said first plurality of nodes to which the directly associated nodes are directly or indirectly dependent on.
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

34. Claims 4-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi. Ansaldi teaches the limitations of Claim 3, as discussed above.

Moreover, in regards to Claim 4:

> 4. The method of operation of claim 3 wherein said replication comprises copying said directly associated nodes, said nodes on which the directly associated nodes are dependent on, and the arcs linking these nodes to one another.
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

35. Claim 5 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi. Ansaldi teaches the limitations of Claim 4, as discussed above.

Moreover, in regards to Claim 5:

> 5. The method of operation of claim 4, wherein
> selected ones of the design variables of said replicated sub-graph are set to constant values, while others are eligible to have values variably assigned; and
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

> the method of operation further comprises receiving instructions to transform selected
> ones of the design variables set to constant values to design variables eligible for
> having values variably assigned, or to transform selected ones of the design
> variables eligible for having values variably assigned to having constant values
> assigned.
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

It is inherent that when making changes to an existing CAD/CAM drawing,

certain parameters remain constant, while others are changed. Moreover, when

making a sequence of changes to a geometric shape (e.g. elongating a cylinder),

a parameter that is changed in a given step is held constant in other steps. So, it

is inherent that variables that are changed go from being constant to being

variable, and vice versa.

36. Claims 6-7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi.   Ansaldi teaches the limitations of Claim 1, as discussed above.

Moreover, in regards to Claims 6:

> 6.   The method of operation of claim 1 further comprising receiving identification of a point or
> an area of the second mechanical design of the CAD tool to reuse the subpart of the first
> mechanical design in the second mechanical design.
> (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

37. Claim 7 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi.   Ansaldi teaches the limitations of Claim 6, as discussed above.

Moreover, in regards to Claim 7:

> 7.   The method of operation of claim 6, wherein said second dependent graph includes
> a second plurality of nodes correspondingly represent a second plurality of design
> variables of the second mechanical design, and a second plurality of arcs linking the
> second plurality of

nodes in accordance with the second plurality of design variables' dependency on one
another; and
(Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

said merging comprises correlating said received identification of the
point/area to one or more nodes of said second plurality of nodes directly associated
with the identified point/area, and attaching the replicated sub-graph to the second
dependent graph by selectively linking nodes of the replicated sub-graph to the
correlated nodes of the second dependent graph.
(Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4)

38. Claim 25 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi. Ansaldi teaches the limitations of Claim 25:

25. An apparatus comprising:
means to replicate a subset of a first modeling representation of a first
mechanical design responsive to instructions identifying a subpart of the first
mechanical design;
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

means to merge the replicated subset into a second modeling representation
of a second mechanical design of the CAD tool to reuse the identified subpart of the first
mechanical
design in the second mechanical design.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

39. Claim 26 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Ansaldi. Ansaldi teaches the limitations of Claim 26:

26. In a computer system, a method of operation comprising the steps of:
replicating a subset of a first modeling representation of a first mechanical
design of a computer aided design (CAD) tool responsive to instructions identifying a
subpart of the first mechanical design;
and
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

merging the replicated subset into a second modeling representation of a
second mechanical design of the CAD tool to reuse the identified subpart of the first
mechanical design in the second mechanical design.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

40. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zeid.

Zeid teaches the limitations of Claim 1:

1. In a computer system, a method of operation comprising:
replicating a sub-graph from a first dependent graph of a first mechanical

> design of a computer aided design (CAD) tool, the first dependent graph having modeling information of the first
> mechanical design and the replicated sub-graph having modeling information of a subpart of the first mechanical design; (Zeid: especially p.392-393)
>
> merging the replicated sub-graph into a second dependent graph of a second mechanical design of the CAD tool to reuse the subpart of the first mechanical design in the second
> mechanical design. (Zeid: especially pp.412-413)

41. Claim 2 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zeid.

Zeid teaches the limitations of Claim 1, as discussed above. Moreover, in

regards to Claim 2:

> 2. The method of operation of claim 1 further comprising receiving identification of the subpart of the first mechanical design, and in response, identifying the sub-graph for replication. (Zeid: especially pp.392-393)

42. Claim 25 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zeid.

Zeid teaches the limitations of Claim 25:

> 25. An apparatus comprising:
>   means to replicate a subset of a first modeling representation of a first
> mechanical design responsive to instructions identifying a subpart of the first
> mechanical design;
> (Zeid: especially p.392-393)
>
> means to merge the replicated subset into a second modeling representation
> of a second mechanical design of the CAD tool to reuse the identified subpart of the first mechanical
> design in the second mechanical design.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

43. Claim 26 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zeid.

Zeid teaches the limitations of Claim 26:

> 26. In a computer system, a method of operation comprising the steps of:
>   replicating a subset of a first modeling representation of a first mechanical
> design of a computer aided design (CAD) tool responsive to instructions identifying a
> subpart of the first mechanical design;
> and
> (Zeid: especially p.392-393)

> merging the replicated subset into a second modeling representation of a
> second mechanical design of the CAD tool to reuse the identified subpart of the first
> mechanical design in the second mechanical design.
> (Zeid: especially pp.412-413)

Claim Rejections - 35 USC § 103

44. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

45. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi. The applicant claims:

> 8.   An article of manufacture comprising:
>   a recordable medium having recorded thereon a plurality of programming
> instructions for use to program an apparatus to enable the apparatus to be able to
> replicate a sub-graph from a first dependent graph of a first mechanical design of a
> computer aided design (CAD) tool, the first dependent graph having modeling information
> of the first mechanical design and the replicated sub-graph having modeling information
> of a subpart of the first-mechanical design, and to be able to merge the replicated
> sub-graph into a second dependent graph of a second mechanical design of the CAD
> tool to reuse the subpart of the first mechanical design in the second mechanical design.

Ansaldi teaches the creation and merging of graphs and sub-graphs as

described in the claim, as discussed above (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4,

pp.132-138). Moreover, Ansaldi specifically teaches that "... we designed an

experimental geometric modeling system for defining and manipulating the

boundary of three-dimensional objects with planar faces, so as to demonstrate

the practical advantages deriving from the use of our model in a CAD

application." (p.131 last paragraph). However, Ansaldi does not specifically teach

the use of a recordable medium having a plurality of programming instructions.

Official Notice is given that at the time of the invention, it would have been

obvious and well known to one of ordinary skill in the art to utilize a recordable

medium (e.g. hard-drive, CD-ROM, floppy disk) in order to store software

applications or the files generated by software applications.

Moreover, at the time of the invention, it would have been obvious to one of

ordinary skill in the art to modify the teachings of Ansaldi by using a recordable

medium in order to be able to store work that is performed because doing so

enables the storage of the results of the simulation for future use.

46. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 8, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 9:

> 9.   The article of claim 8, wherein the programming instructions further enable
> the apparatus to be able to receive identification of the subpart of the first
> mechanical design, and in response, identify the sub-graph for replication.
> (Ansaldi: p.131 last paragraph)

47. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 9, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 10:

> 10.   The article of claim 9, wherein
>   said first dependent graph includes a first plurality of nodes correspondingly
> represent a first plurality of design variables of the first mechanical design, and a
> first plurality of arcs linking the first plurality of nodes in accordance with the first
> plurality of design variables' dependency on one another; and
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)
>
>   the programming instructions further enable the apparatus to be able to
> identify the sub-graph for replication by correlating said received identification to one

or more nodes of said first plurality of nodes directly associated with the subpart,
and then following applicable ones of said first plurality of arcs to identify all other
nodes of said first plurality of nodes to which the directly associated nodes are
directly or indirectly dependent on.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

48. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi. Ansaldi teaches the limitations of Claim 10, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 11:

> 11.   The article of claim 10 wherein the programming instructions further enable
> the apparatus to be able to replicate the identified sub-graph by copying said directly
> associated nodes, said nodes the directly associated nodes are dependent on, and
> the arcs linking these nodes to one another.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

49. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 11, as discussed above. Moreover, in

regards to Claim 12:

> 12.   The article of claim 11, wherein
> selected ones of the design variables of said replicated sub-graph are set to
> constant values, while others are eligible to have values variably assigned; and
> the programming instructions further enable the apparatus to be able to
> receive instructions to transform selected ones of the design variables set to
> constant values to design variables eligible for having values variably assigned, or to
> transform selected ones of the design variables eligible for having values variably
> assigned to having constant values assigned.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

Ansaldi does not specifically teach design variables that are set to either constant

or variable values. However, at the time of the invention, it would have been

obvious to one of ordinary skill in the art that when making changes to an existing

CAD/CAM drawing, certain parameters remain constant, while others are

changed because doing so enables making changes on part of the drawing while

leaving the other parts untouched.

Moreover, it would have been obvious that when making a sequence of

changes to a geometric shape, a parameter that is changed in a given step (e.g.

height is changed when elongating a cylinder) is held constant in other steps

(e.g. height is constant when increasing the radius of a cylinder). It would have

been obvious at the time of the invention to include this feature because doing so

enables making changes on part of the drawing while leaving the other parts

untouched.

50. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi. Ansaldi teaches the limitations of Claim 8, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 13:

> 13.   The article of claim 8, wherein the programming instructions further enable
> the apparatus to be able to receive identification of a point or an area of the second
> mechanical design of the CAD tool to reuse the subpart of the first mechanical design in
> the second
> mechanical design.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

51. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 13, as discussed above. Moreover,

Ansaldi teaches the limitations of Claim 14:

> 14.   The article of claim 13, wherein
> said second dependent graph includes a second plurality of nodes
> correspondingly represent a second plurality of design variables of the second
> mechanical design, and a second plurality of arcs linking the second plurality of
> nodes in accordance with the second plurality of design variables' dependency on
> one another; and
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)
>
> the programming instructions further enable the apparatus to be able to
> correlate the received identification of the point/area to one or more nodes of said
> second plurality of nodes directly associated with the identified point/area, and to
> attach the replicated sub-graph to the second dependent graph by selectively linking
> nodes of the replicated sub-graph to the correlated nodes of the second dependent

graph.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

52. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 8, as discussed above. Moreover,

Ansaldi teaches the limitations of Claims 15:

> 15. The article of claim 8, wherein the programming instructions are integral part
> of a computer aided design tool.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

53. Claims 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi. The applicant claims:

> 16. An apparatus comprising:
> at least one storage medium having stored therein a first and a second
> plurality of programming instructions; and
>
>   at least one processor coupled to the at least on storage medium to execute
> the first plurality of programming instructions to replicate a sub-graph from a first
> dependent graph of a first mechanical design of a computer aided design (CAD) tool, the
> first dependent graph having
> modeling information of the first mechanical design and the replicated sub-graph
> having modeling information of a subpart of the first mechanical design, and to
> execute the second plurality of programming instructions to merge the replicated
> sub-graph into a second dependent graph of a second mechanical design of the CAD tool
> to reuse the subpart of the first mechanical design in the second mechanical design.

Ansaldi teaches the creation and merging of graphs and sub-graphs as

described in the claim, (Ansaldi: Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138).

Moreover, Ansaldi specifically teaches that "... we designed an experimental

geometric modeling system for defining and manipulating the boundary of three-

dimensional objects with planar faces, so as to demonstrate the practical

advantages deriving from the use of our model in a CAD application." (p.131 last

paragraph). However, Ansaldi does not specifically teach the use of a storage

medium having a plurality of programming instructions, nor of the use of a

processor.

It is inherent that a CAD/CAM system, being a computer system, has one or

more processors to execute the programming instructions.

Official Notice is given that at the time of the invention, it would have been

obvious and well known to one of ordinary skill in the art to utilize a storage

medium (e.g. hard-drive, CD-ROM, floppy disk) in order to store software

applications or the files generated by software applications.

It would have obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Ansaldi by using a storage

medium in order to store of the results of the simulation for future use.

54. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 16, as discussed above.

Moreover, in regards to Claims 17:

> 17. The apparatus of claim 16, wherein the at least one processor further
> executes the second plurality of programming instructions to receive identification of
> the subpart of the first mechanical design, and in response, identify the sub-graph
> for replication. (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

It is inherent that a CAD/CAM system, being a computer system, has at least one

processor to execute the programming instructions.

55. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 17, as discussed above.

Moreover, in regards to Claim 18:

> 18. The apparatus of claim 17, wherein said first dependent graph includes a first plurality
> of nodes correspondingly

represent a first plurality of design variables of the first mechanical design, and a
first plurality of arcs linking the first plurality of nodes in accordance with the first
plurality of design variables' dependency on one another; and
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

the at least one processor further executes the first plurality of programming
instructions to identify the sub-graph for replication by correlating said received
identification of the subpart to one or more nodes of said first plurality of nodes
directly associated with the identified subpart, and to follow applicable ones of said
first plurality of arcs to identify all other nodes of said first plurality of nodes to which
the directly associated nodes are directly or indirectly dependent on.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

It is inherent that a CAD/CAM system, being a computer system, has at least one

processor to execute the programming instructions.

56. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 18, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 19:

19. The apparatus of claim 18 wherein the at least one processor further
executes the first plurality of programming instructions to replicate the identified sub
graph by copying said directly associated nodes, said nodes on which the directly
associated nodes are dependent on, and the arcs linking the these nodes to one
another. (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

It is inherent that a CAD/CAM system is able to produce copies ("replications"), in

the computer memory, of elements of the drawings that are stored in the system

memory.

57. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 19, as discussed above. Moreover, in

regards to Claim 20:

20. The apparatus of claim 19, wherein
selected ones of the design variables of said replicated sub-graph are set to
constant values, while others are eligible to have values variably assigned; and
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

the at least one processor further executes the second plurality of
programming instructions to receive instructions to transform selected ones of the
design variables set to constant values to design variables eligible for having values
variably assigned, or to transform selected ones of the design variables eligible for
having values variably assigned to having constant values assigned.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

Ansaldi does not specifically teach design variables that are set to either constant

or variable values. However, at the time of the invention, it would have been

obvious to one of ordinary skill in the art that when making changes to an existing

CAD/CAM drawing, certain parameters remain constant, while others are

changed because doing so enables making changes on part of the drawing while

leaving the other parts untouched.

Moreover, it would have been obvious that when making a sequence of

changes to a geometric shape, a parameter that is changed in a given step (e.g.

height is changed when elongating a cylinder) is held constant in other steps

(e.g. height is constant when increasing the radius of a cylinder). It would have

been obvious at the time of the invention to include this feature because doing so

enables making changes on part of the drawing while leaving the other parts

untouched.

58. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ansaldi.   Ansaldi teaches the limitations of Claim 16, as discussed above.

Moreover, Ansaldi teaches the limitations of Claim 21:

21. The apparatus of claim 16, wherein the at least one processor further
executes the second plurality of programming instructions to receive identification of

a point or an area of the second mechanical design of the CAD tool to reuse the subpart of the first
mechanical design in the second mechanical design.
(Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

It is inherent that a CAD/CAM system, being a computer system, has at least

one processor to execute the programming instructions.

59. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 21, as discussed above. Moreover,

Ansaldi teaches the limitations of Claim 22:

> 22. The apparatus of claim 21, wherein
> said second dependent graph includes a second plurality of nodes
> correspondingly represent a second plurality of design variables of the second
> mechanical design, and a second plurality of arcs linking the second plurality of
> nodes in accordance with the second plurality of design variables' dependency on
> one another; and
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)
>
> the at least one processor further executes the second plurality of
> programming instructions to correlate the received identification of the point/area to
> one or more nodes of said second plurality of nodes directly associated with the
> identified point/area, and to attach the replicated sub-graph to the second
> dependent graph by selectively linking nodes of the replicated sub-graph to the
> correlated nodes of the second dependent graph.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

60. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 16, as discussed above. Moreover,

Ansaldi teaches the limitations of Claims 23:

> 23. The apparatus of claim 16, wherein the at least one processor consists of a
> processor executing both the first and second plurality of programming instructions.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

It is inherent that a CAD/CAM system, being a computer system, has at least one

processor to execute the programming instructions.

61. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansaldi.

Ansaldi teaches the limitations of Claim 16, as discussed above. Moreover, in

regards to Claims 24:

> 24. The apparatus of claim 16, wherein the at least one processor comprises a
> first and a second processor communicatively coupled to each other to
> correspondingly execute the first and second plurality of programming instructions.
> (Ansaldi: p.131 last paragraph, Fig.1, Fig.2, Fig. 3, Fig. 4, pp.132-138)

Ansaldi does not teach the use of two coupled processors to execute the

programming instructions. However, it would have been obvious to one of

ordinary skill in the art at the time of the invention to use a personal computer

that had both a CPU, as well as a math co-processor or graphics-specific

processor embedded in a "graphics card" in order to speed up the execution time

of the software.

62. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zeid in

view of Official Notice.   The applicant claims:

> 8.   An article of manufacture comprising:
> a recordable medium having recorded thereon a plurality of programming
> instructions for use to program an apparatus to enable the apparatus to be able to
> replicate a sub-graph from a first dependent graph of a first mechanical design of a
> computer aided design (CAD) tool, the first dependent graph having modeling information
> of the first mechanical design and the replicated sub-graph having modeling information
> of a subpart of the first-mechanical design, and to be able to merge the replicated
> sub-graph into a second dependent graph of a second mechanical design of the CAD
> tool to reuse the subpart of the first mechanical design in the second mechanical design.

Zeid teaches the creation and merging of graphs and sub-graphs as

described in the claim, (Zeid: especially pp.392-393 and pp.412-413). Moreover,

Zeid's teaching is directly related to CAD applications (see title). However, Zeid

does not specifically teach the use of a recordable medium having a plurality of programming instructions.

Official Notice is given that at the time of the invention, it was obvious and well known to one of ordinary skill in the art to utilize a recordable medium (e.g. hard-drive, CD-ROM, floppy disk) in order to store software applications or the files generated by software applications.

Moreover, at the time of the invention, it would have obvious to one of ordinary skill in the art to modify the teachings of Zeid by using a recordable medium in order to be able to store work that is performed.

63. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zeid.

The applicant claims:

> 16.   An apparatus comprising:
> at least one storage medium having stored therein a first and a second
> plurality of programming instructions; and
>
> at least one processor coupled to the at least on storage medium to execute
> the first plurality of programming instructions to replicate a sub-graph from a first
> dependent graph of a first mechanical design of a computer aided design (CAD) tool, the
> first dependent graph having
> modeling information of the first mechanical design and the replicated sub-graph
> having modeling information of a subpart of the first mechanical design, and to
> execute the second plurality of programming instructions to merge the replicated
> sub-graph into a second dependent graph of a second mechanical design of the CAD tool
> to reuse the subpart of the first mechanical design in the second mechanical design.

Zeid teaches the creation and merging of graphs and sub-graphs as descried in the claim, (Zeid: especially pp.392-393 and pp.412-413). Moreover, Zeid's teaching is directly related to CAD applications (see title). However, Zeid does

not specifically teach the use of a storage medium having a plurality of

programming instructions, nor of the use of a processor.

It is inherent that a CAD/CAM system, being a computer system, has one or

more processors to execute the programming instructions.

Official Notice is given that at the time of the invention, it would have been

obvious and well known to one of ordinary skill in the art to utilize a storage

medium (e.g. hard-drive, CD-ROM, floppy disk) in order to store software

applications or the files generated by software applications.

It would have obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Zeid by using a storage medium

in order to store of the results of the simulation for future use.

Response to Arguments

64. Applicants' arguments filed 1/28/99 have been fully considered but they are not

persuasive.

Claim Objections

65. Examiner has withdrawn the objections to Claims 5, 12, and 20 under

37 CFR 1.75(c), and replaced them with objections because of informalities.

66. Examiner has withdrawn the objections to Claims 6, 13, and 21 under

37 CFR 1.75(c).

Claim Rejections - 35 USC § 112

67. Examiner is maintaining the 35 U.S.C. 112, first paragraph rejection of Claim 1.

Applicant has not provided references in the specification to refute Examiner's

rejection. Applicant's assertion (paper #10, p.11) that "limitations of claim 1 are

described in the specification using languages and terminologies at a level that is

consistent with the manner persons skilled in the relevant art present their works

to one another" is mere attorney argument. Argument does not replace evidence

where evidence is necessary. The arguments of counsel cannot take the place of

evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718

(CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

See MPEP §2145.

68. Examiner is maintaining the 35 U.S.C. 112, first paragraph rejection of Claim 2.

Applicant's assertion (paper #10, p.12) is that p.11 in the specification satisfies

the enablement requirement. The cited page (as well as p.10 in the specification)

asserts that the functionality exists in the invention, however, it does not enable

one of ordinary skill in the art as to how to implement "identifying the sub-graph

for replication".

69. Examiner is maintaining the 35 U.S.C. 112, first paragraph rejections of Claims 8,

9, 16, 17, 25, and 26. Applicant has not provided references in the specification

to refute Examiner's rejection. Argument does not replace evidence where evidence is necessary. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). See MPEP §2145.

70. Examiner is maintaining the 35 U.S.C. 112, first paragraph rejections of Claim 24. Applicant's assertion (paper #10, p.13) is that pp.13-14 in the specification satisfies the enablement requirement. The cited pages assert that the functionality exists in the invention, however, it does not enable one of ordinary skill in the art as to <u>how</u> to implement "a first and second processor communicatively coupled to each other to correspondingly execute the first and second plurality of programming instructions".

   Moreover, Applicant's assertion that Applicant's response that "limitations of claim 24 are described in the specification using languages and terminologies at a level that is consistent with the manner persons skilled in the relevant art present their works to one another" (paper #10, p.13) is mere attorney argument. Argument does not replace evidence where evidence is necessary.

71. In regards to Claims 2-7, 9-15, and 17-24, Examiner has maintained the 35 U.S.C. 112, first paragraph rejections of Claims 1, 8, and 16. Claims 2-7, 9-15,

and 17-24 depend from claims 1, 8, and 16, thereby incorporating their
limitations.

Claim Interpretations

72. Examiner is maintaining the interpretation of "replication" and "replicating" as
being equivalent to making an exact copy. Applicant (paper #10, p.14) has not
contested this interpretation.

73. Examiner is maintaining the interpretation of "merging" two graphs as being
equivalent to connecting two graphs. Applicant (paper #10, p.14) has not
contested this interpretation.

74. Examiner interprets "dependent graph of a design" as being equivalent to a data
structure that supports Euler or "Euler-like" operations on boundary models. (See
Mäntylä, p. 174). Applicant (paper #10, p.14) has contested the original
interpretation, and has cited specification p.7 and Figure 2 as grounds for this
traversal. Examiner accepts Applicant's argument, hereby interpreting the
dependant graph as described in specification p.7: as being equivalent to a graph
consisting of nodes and arcs.

75. Examiner interprets "modeling information" (claims 1,8,16) as being equivalent to
node, segment or face identification or position data. Applicant (paper #10, p.14)

has contested the original interpretation, citing specification p.7. Examiner finds

no conflict between the two.

76. Examiner interprets "design variables" (claims 3, 5, 7, 10, 12, 14,18, 20, 22) as

being variables derived from "modeling information", variables such as length of

a line, orthogonal direction vector for a face, etc. Applicant (paper #10, p.14) has

contested the original interpretation, citing specification p.7. Examiner finds no

conflict between the two.

Claim Rejections - 35 USC § 101

77. In view of Applicant's amendment to Claims 1 and 26, Examiner is withdrawing

the 35 USC §101 rejections of these claims.

Claim Rejections - 35 USC § 102

78. All of the 35 USC § 102 Claim Rejections that were based on Mäntylä_1 have

been withdrawn on the basis of Applicant's arguments.

79. Examiner has added 35 USC § 102 Claim Rejections based on Zeid (provided by

Applicant in paper #8) for claims 1,2, 25, and 26.

80. Examiner respectfully disagrees with Applicant's arguments regarding the 35

USC § 102 Claim Rejections that were based on Ansaldi (paper #10, pp.19-20).

Ansaldi clearly teaches "replicating a sub-graph from a first-dependent graph of a

first mechanical design of a computer aided design (CAD) tool" and "merging the

replicated sub-graph into a second dependent graph of a second mechanical design of the CAD tool to reuse the subpart of the first mechanical design in the second mechanical design".

- In regards to replicating and merging a sub-graph, see p.139, col.1, lines 9-20; and Fig. 2(d).

- In regards to a mechanical design of a (CAD) tool, see p.131, col.2, para.3 and 4.

81. Applicant argues that "In addition, claims 2-7 include numerous limitations that render these claims further patentable over Ansaldi" (paper #10, p.21), however this is mere attorney argument. Argument does not replace evidence where evidence is necessary.

Claim Rejections - 35 USC § 103

82. All of the 35 USC § 103 Claim Rejections that were based on Mäntylä_1 have been withdrawn on the basis of Applicant's arguments.

83. Examiner has added 35 USC § 102 Claim Rejections based on Zeid (provided by Applicant in paper #8) for claims 8 and 16.

84. Applicant argues that "Even if it was obvious and well known to one of ordinary skill in the art to utilize a recordable medium, Ansaldi is nevertheless deficient ..." Applicant has not made any argument contesting Examiner's assertion of obviousness in this regard. Therefore Examiner assumes that Applicant is not contesting this assertion.

85. Examiner respectfully disagrees with Applicant's arguments regarding the 35

USC § 103 Claim Rejections that were based on Ansaldi (paper #10, p.21).

Ansaldi clearly teaches "replicating a sub-graph from a first-dependent graph of a

first mechanical design of a computer aided design (CAD) tool" and "merging the

replicated sub-graph into a second dependent graph of a second mechanical

design of the CAD tool to reuse the subpart of the first mechanical design in the

second mechanical design".

- In regards to replicating and merging a sub-graph, see p.139, col.1, lines 9-

20; and Fig. 2(d).

- In regards to a mechanical design of a (CAD) tool, see p.131, col.2, para.3

and 4.

Conclusion

86. Applicant's submission of an information disclosure statement under 37 CFR

1.97(c) with the fee set forth in 37 CFR 1.17(p) on 8/5/02 prompted the new

ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION**

IS MADE FINAL. See MPEP § 609(B)(2)(i). Applicant is reminded of the

extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

87. The following prior art, made of record and not relied upon, is considered

pertinent to applicant's disclosure.

88. "List of Publications: Martti Mäntylä", http://www.cs.hut.fi/~mam/publ.html

(henceforth "Mantyla_3")

89. "Model-Based Orientation-Independent 3-D Machine Vision Techniques", de

Figueiredo et al., <u>IEEE Transactions on Aerospace and Electronics Systems</u>, Vol.

24, No. 5, pp. 597-607, Sept. 1988. (henceforth "de Figueiredo")

Correspondence Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ayal I. Sharon whose telephone number is

(703) 306-0297. The examiner can normally be reached on Monday through Thursday,

and the first Friday of a biweek, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kevin Teska can be reached on (703) 305-9704. Any response to this office

action should be mailed to:

> Director of Patents and Trademarks
> Washington, DC 20231

Hand-delivered responses should be brought to the following office:

> 4th floor receptionist's office
> Crystal Park 2
> 2121 Crystal Drive
> Arlington, VA

The fax phone numbers for the organization where this application or proceeding is

assigned are:

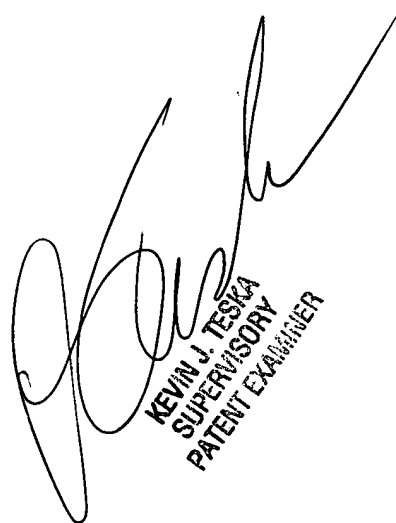|	
Official communications:	(703) 746-7239
Non-Official / Draft communications	(703) 746-7240
After Final communications	(703) 746-7238

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist, whose telephone number is:

(703) 305-3900.

Ayal I. Sharon

Art Unit 2123

October 18, 2002